

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BASIL A. OMAR, GRAHAM J. WOODGATE and DAVID EZRA

Appeal No. 1999-0597
Application 08/592,812

ON BRIEF

Before JERRY SMITH, RUGGIERO and LALL, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-4, 6, 7, 10, 11, 19, 20 and 22-26. Claims 5, 8, 9, 12, 14-18, 21 and 27-30 stand withdrawn from consideration as being directed to a nonelected invention. Claim 31 has been indicated to contain allowable subject matter. The only pending rejection of claim 13 has

been withdrawn by the examiner [answer, page 2].

The disclosed invention pertains to a three dimensional display which is switchable between an autostereoscopic mode and a stereoscopic mode.

Representative claim 1 is reproduced as follows:

1. A three dimensional display, comprising:

an imaging system; and

at least one illumination system arranged to illuminate a first limited region of space in which a three dimensional image is viewable in an autostereoscopic mode and a second region of space which is extended with respect to the first region and in which the three dimensional image is viewable in a stereoscopic mode,

wherein the three dimensional display is switchable between the autostereoscopic mode and the stereoscopic mode.

The examiner relies on the following references:

Travis	5,132,839	July 21, 1992
Faris	5,264,964	Nov. 23, 1993

Claims 1-4, 10, 11, 19, 20 and 22-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Faris. Claims 6 and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Faris in view of Travis. Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs

Appeal No. 1999-0597
Application 08/592,812

and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of anticipation and obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon supports the rejection of claims 1-4, 6, 7, 10, 11, 19, 20 and 22-26. Accordingly, we affirm.

We consider first the rejection of claims 1-4, 10, 11, 19, 20 and 22-26 as being anticipated by the disclosure of Faris. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of

inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Claims 1-4, 10, 11, 19 and 20 stand or fall together as a single group [brief, page 4], and we will consider the rejection with respect to independent claim 1 as representative of all the claims of this group. With respect to claim 1, the examiner has found clear anticipation based on the disclosure of Faris. Appellants argue that the examiner has misconstrued the meaning of the claim language. Specifically, appellants argue that the examiner has interpreted the claimed "regions of space" to be at the imaging system instead of where the three dimensional image is viewable. Appellants further argue that the illumination system, not the imaging system, defines the region of space in which three dimensional images are viewable. Finally,

appellants argue that in Faris the same region of space is viewable in both modes of operation [brief, pages 4-8].

Appellants and the examiner disagree as to what is disclosed to the artisan by Figures 5b and 5c of Faris. Figure 5c shows the autostereoscopic mode of Faris and Figure 5b shows the stereoscopic mode of Faris. It is the examiner's position that a portion of the image can be viewed in Figure 5b in a portion of space whereas the same portion of the image in Figure 5c cannot be viewed. Thus, according to the examiner, the region of space where the three dimensional image is viewable in the stereoscopic mode of Faris extends past the region of space where the three dimensional image is viewable in the autostereoscopic mode of Faris [answer, pages 4-5]. Appellants respond that the illumination system in Faris illuminates the same region of space for both modes of operation [reply brief].

The appropriate question to consider is what is meant by illuminating a first and second region of space as recited in claim 1. The examiner finds that a location where an image can be seen in Faris means that that location has been illuminated. Appellants argue that a region of space which

is illuminated is determined by the illumination source and not by the associated optics.

Although we agree with appellants that an area where an image is viewable is not necessarily an area which is illuminated in any way, we do not agree with appellants' arguments as they relate to Faris. The light source 12 in Faris radiates light out through levels 8, 9, 18 and 19 to the eyes 24, 25 or to glasses 10. In theory, it is the intensity of light source 12 which

determines how much of the space beyond the light source is illuminated. Also in theory, the illumination from light source 12 can reach eyes 24, 25 or glasses 10 provided the illumination is not cut off by optical filters. We agree with the examiner that the polarizing filters 21 in Faris determine what areas of space are illuminated by light source 12 because these filters determine whether light from the light source gets to those areas. Thus, as noted by the examiner, light from light source 12 can illuminate an area to the far right of Faris' Figure 5b which illumination in the same area is cut

off by the polarizing filters in Faris' Figure 5c.

In summary, we find that the light source 12 in Faris illuminates an area of space determined by the intensity of the light source and the associated optical elements which determine whether light from the light source gets through. We agree with the examiner that there are regions of space above layer 19 that are illuminated by light source 12 as long as the light is not cut off by polarizing filters 21. Since the polarizing filters of the autostereoscopic mode are placed differently from the polarizing filters of the stereoscopic mode, these regions of space are different from each other. Thus, we agree with the examiner that the illumination system of Faris illuminates two different regions of space in which the three dimensional image is viewable. Accordingly, we sustain the anticipation rejection of claims 1-4, 10, 11, 19 and 20.

Claim 22 is argued separately by appellants. With respect to claim 22, appellants argue that Faris does not disclose a viewing aid in cooperation with the display in the autostereoscopic mode [brief, pages 8-9]. The examiner responds that he is reading the viewing aid on the control

mechanism 20 of Faris. Appellants respond that the display control mechanism 20 of Faris does not allow an observer to view a three dimensional image in the stereoscopic mode and is not a viewing aid as required by claim 22 [reply brief].

We agree with the position argued by the examiner. Control mechanism 20 of Faris switches the display between the autostereoscopic mode and the stereoscopic mode. Since the switch determines what mode the device is in, the switch operates to permit an observer to see the three dimensional image in the stereoscopic mode [claim 19]. The switch also cooperates with the display in the autostereoscopic mode [claim 22] because it holds the display in that mode. Thus, we agree with the examiner that the invention as broadly recited in claim 22 is fully met by the disclosure of Faris.

Claims 23-26 are separately argued as a single group by appellants [brief, page 4]. With respect to representative, independent claim 23, appellants argue that Faris does not teach or suggest use of a viewing aid in an autostereoscopic mode of operation to reduce cross-talk [brief, page 9]. As noted above, the examiner reads the viewing aid on the control mechanism 20 of Faris. The

examiner also finds that all the elements of Faris cooperate to provide a working organization of elements that reduce cross-talk in both modes of operation [answer, page 6].

Appellants respond that the control mechanism 20 of Faris does not meet the definition of "viewing aid" as set forth in the specification [reply brief].

A viewing aid is a device or structure which is used or worn by an observer and may include spectacles. It is the examiner's position that the display control mechanism of Faris is broadly used by an observer in the autostereoscopic mode and that in addition to being a viewing aid, the mechanism 20 also reduces cross-talk by providing an appropriate autostereoscopic display. We agree with the examiner that the invention as broadly recited in claim 23 is fully met by the system disclosed by Faris. Therefore, we sustain the rejection of claims 23-26 as anticipated by the disclosure of Faris.

We now consider the rejection of claims 6 and 7 under 35 U.S.C. § 103 as being unpatentable over the teachings of Faris and Travis. The examiner indicates why he finds obviousness on pages 5-6 of the final rejection. Appellants

Appeal No. 1999-0597
Application 08/592,812

only argument in the main brief is that claims 6 and 7 are not obvious over Faris and Travis based on the dependency of these claims from claim 1. The examiner indicated that this did not constitute a separate argument for patentability. Appellants provided additional arguments with respect to claims 6 and 7 in the reply brief.

We will sustain the rejection of claims 6 and 7 based on appellants' failure to make any persuasive arguments in the original brief. Since an examiner is not permitted to respond to a reply brief filed by appellants, we are not inclined to permit appellants to argue claims for the first time in a reply brief. To allow appellants to argue claims 6 and 7 for the first time in the reply brief would merely encourage an appellant to withhold arguments until the reply brief when the examiner is not permitted to respond. We do not intend to promote such a practice.

In conclusion, we have sustained each of the examiner's rejections of the claims on appeal. Therefore, the

Appeal No. 1999-0597
Application 08/592,812

decision of the examiner rejecting claims 1-4, 6, 7, 10, 11,
19, 20 and 22-26 is affirmed.

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED

JERRY SMITH)	
Administrative Patent Judge)	
)	
)	
)	
JOSEPH F. RUGGIERO)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
PARSHOTAM S. LALL)	
Administrative Patent Judge)	

JS/ki

Appeal No. 1999-0597
Application 08/592,812

Armand P. Boisselle
Renner, Otto, Boisselle & Skylar
The Keith Building
1621 Euclid Avenue, Nineteenth Floor
Cleveland, OH 44115